

A B S T R A C T

A BANDPASS FILTER WITH CARRIER FREQUENCY REDUCTION

5 The invention provides a bandpass filtering method in which two frequency transpositions are performed in parallel on an input signal (SE) for filtering using respective first and second upstream mixing signals (SM1, SM2) that are substantially in phase quadrature so as to
10 obtain respective first and second transposed signals (ST1, ST2), and the two transposed signals are filtered respectively by two lowpass filters (F1, F2), the frequency of the transposition signals (ω_0) and the passband (B/2) of the low-pass filters being related to
15 the frequency of the input signal (ω_e) and to the passband desired for the bandpass filter, then respective frequency transpositions are performed on the first and second filtered transposed signals (STF1, STF2) using two respective downstream mixing signals, and the sum or the
20 difference of the two signals obtained in this way is taken, the frequency of the output mixing signals (SMV1, SMV2) is selected to be different from the frequency of the first and second mixing signals so that the output signal is transposed into a desired frequency range, the
25 method being characterized in that a common oscillator (LO) is used which is coupled with a first phase shifter (MTM) to produce the upstream mixing signals and which is coupled with a second phase shifter (MTV) to produce the downstream mixing signals, and in that the phase shifters
30 are used in opposite manner on the first and second signals so that each of said first and second signals (VT1, VT2) receives the phase-advanced output signal from one of the two phase shifters and the phase-delayed output signal from the other of the two phase shifters.

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